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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,223	06/08/2006	Edith Trost Sorensen	P30040	3853

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GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER	
WEBB, WALTER E	

ART UNIT	PAPER NUMBER
1612	

NOTIFICATION DATE	DELIVERY MODE
08/30/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No.	Applicant(s)	
	10/582,223	SORENSEN, EDITH TROST	
	Examiner	Art Unit	
	WALTER E. WEBB	1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-16 and 21-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-16 and 21-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/15/2010 and 7/12/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicants' arguments, filed 6/15/2010, have been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Claim Rejections - 35 USC § 103—New by Amendment

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1) Claims 3-11, 13, 14, 16 and 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al., (US 6,416,744) in view of Cordon et al., (US 3,989,814).

Robinson et al. teaches a tooth whitening chewing gum composition capable of whitening and removing stains from teeth, the composition containing from about 0.5 to about 3.0% by weight of silica particles (see col. 1, lines 59-64). The silica may be combined with other known dentifrice abrasives or polishing agents, e.g. calcium phosphate (see col. 2, lines 63-66). Suitable gum base materials include natural or synthetic gum bases or mixtures thereof **(claim 4)** (see col. 3, lines 18-26). Additives include sweetening agents such as sodium saccharin **(claim 6)** although the composition is preferably sugarless since sugarless gums to don't promote tooth decay

(**claim 7**) (see col. 3, lines 11-14 and lines 32-40). Robinson et al. teaches a specific chewing gum composition comprising more than 75% by weight of solid materials (**claims 21, 22**), including 25.4% of a chewing gum base (**claims 3, 5, 25, 26**), additives, 0.42% of titanium dioxide (whitening agent) (**claims 8, 9, 27, 28**), sodium bicarbonate (whitening agent) (**claims 8-11**), zinc gluconate (oral hygiene promoting agent) (**claim 13**), tetrasodium pyrophosphate (anti-calculus agent) (claim 13), gelatin (supplement) (**claim 14**) (see Table I at col. 4).

Robinson et al. attributes stains on teeth to many substances that an individual comes in contact with on a daily basis such as foods, tobacco products and fluids such as tea and coffee (see col. 1, lines 19-26). These products or substances form a pellicle film cover over the teeth (Id). While toothpastes are available for use, they are not convenient to use when outside of the home (see col. 1, lines 31-36). Thus, the stain-removing chewing gum of Robinson et al. "would be especially beneficial and convenient for use immediately after consuming stain-inducing foods, coffee, tea, red wine, and tobacco products" (see col. 1, lines 37-46). Whitening tests were also performed on teeth stained with coffee (see col. 5, lines 6-22).

The composition of Robinson et al. differs from claims 21 and 22 insofar as it does not teach calcium pyrophosphate.

Cordon et al. teaches a dentifrice possessing enhanced polishing characteristics containing an abrasive system including at least calcium pyrophosphate and a non-toxic zinc compound. The function of an abrasive substance in the formulations is to remove pellicle film from the surface of the teeth (see col. 1, lines 40-45). Cordon et al.

describes calcium pyrophosphate as an "abrasive material which commonly can provide dentifrices in which it is incorporated with a radioactive enamel abrasion value (RAE) as high as about 450 or more" (see col. 1, lines 8-11). A dentifrice having superior cleaning and polishing characteristics will contain the abrasive system, including calcium pyrophosphate, preferably in an amount of at least about 7.5% by weight of the dentifrice **(claims 21-24)** (see col. 1, lines 15-19). The dentifrice may include additional dental abrasives, such as silicas. Various other materials may also be incorporated such as urea **(claims 16, 29-31)**, which may be added in amounts up to about 5% (see col. 5, lines 15-18). Vehicle for the dentifrice may contain natural or synthetic gums (col. 3, lines 52-54).

It would have been obvious to a person having ordinary skill in the art to add the calcium pyrophosphate of Cordon et al. to the chewing gum of Robinson et al., since calcium pyrophosphate is a known dentifrice abrasive, and has been taught by Cordon et al. to provide superior cleaning and polishing characteristics to dentifrices. The artisan would have a reasonable expectation of success in using calcium pyrophosphate in the composition of Robinson et al. since Robinson et al. teaches the use of other calcium phosphates, e.g. tricalcium phosphate.

2) Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (*supra*) and Cordon et al. (*supra*) as applied to claims 3-11, 13, 14, 16 and 21-34 above, and further in view of Gibbs et al., (International Journal of Food Sciences and Nutrition 1999).

The combination of Robinson et al. and Cordon et al. differs from the instant claim 12 insofar as it does not teach encapsulation of at least one additive.

Gibbs et al. teaches encapsulation of food ingredients such as flavoring agents, acids, bases, antioxidants, sweeteners. (See abstract.) Encapsulation is useful to enhance the stability and maintain viability of foods and also to allow for site-specific and or stage specific release of ingredients. (See ibid.)

It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to encapsulate at least one additive of Robinson et al. since doing so would prevent loss of flavor, add stability to the composition, and/or allow for a controlled release of the additive.

3) Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (*supra*) and Cordon et al. (*supra*) as applied to claims 3-11, 13, 14, 16 and 21-34 above, and further in view of Rajaiah et al., (US 2003/0072841).

The combination of Robinson et al. and Cordon et al. differs from the instant claim 15 insofar as it does not teach adding vitamin C.

Rajaiah et al. teaches a chewing gum and confection composition that inhibits buildup of plaque and other debris on teeth, thereby inhibiting gingivitis, caries and staining (see abstract). The reference teaches adding nutrients such as vitamin C for improving conditions of the oral cavity (see paragraph [0038]).

Generally, it is also *prima facie* obvious to select a known material based on its suitability for its intended use (see MPEP 2144.06). Also, established precedent holds

that it is generally obvious to add known ingredients to known compositions with the expectation of obtaining their known function (see Id).

Thus, it would have been obvious to a person havening ordinary skill in the art at the time of applicant's invention to have used vitamin C in the composition of Robinson et al., based on their suitability for their intended use, as taught by Rajaiah et al.

Furthermore, the artisan would have been motivated to provide the composition of Robinson et al. with a nutrient for improving conditions for the oral cavity, as taught by Rajaiah et al.

Response to Amendment

In view of the amendment to the claims 21 and 22 the previous 112, indefiniteness rejection has been withdrawn. It was explained previously that the instant claims 21 and 22 would be allowable if the 112 indefinitness rejection is overcome and the claims are in condition for allowance. However, the instant claims are not in condition for allowance since the claims as amended are unpatentable over Robinson et al. (*supra*) in view of Cordon et al. (*supra*).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter E. Webb whose telephone number is (571) 270-3287. The examiner can normally be reached on 8:00am-4:00pm Mon-Fri EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick F. Krass can be reached (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Walter E. Webb
/Walter E Webb/
Examiner, Art Unit 1612

/Frederick Krass/

Supervisory Patent Examiner, Art Unit 1612